

Rulison Monitoring Results

Battlement Mesa 35-32A

Well: Gas production well, Battlement Mesa 35-32A, API # 05-045-10919

Operator: Noble Energy Incorporated

Sampler: U.S. Department of Energy, Office of Legacy Management, Grand Junction, CO.

Date of Sampling Event: 22 January 2009

A produced water sample was collected from production well BM 35-32A.

Location data for the surface collection point and the sample location are given in Table 1. A description of each sample collected is listed in Table 2.

Table 1. Well BM 35-32A, API # 05-045-10919

Sample Point Location	Location	Sample Location						
		Sea Level elevation (feet)	Distance (feet) from		Surface		Distance from GZ (miles)	Heading from GZ (deg)
			N-S Section line	E-W Section line	Latitude (NAD 27)	Longitude (NAD 27)		
Surface	NENW S35 T7S R95W	9236.0	766 FNL	2,126 FWL	39.398936	-107.965912	1.07	S70.4°W
Subsurface	SWNE S35 T7S R95W	-82.5	1,472 FNL	2,080 FEL	39.396980	-107.962163	0.96	S60.0°W

Location data updated 29 January 2009.

NA: not available

The subsurface elevation is at the bottom of the well.

Link to Colorado Oil and Gas Conservation Commission information about well BM 35-32A:

<http://oil-gas.state.co.us/cogis/FacilityDetail.asp?facid=04510919&type=WELL>

Table 2. Sample Description

Sample Ticket No.	Location			Field Sample Matrix	Analytes	Samp Vol. (L)	Comments
	Name	Type	Sub-type				
HCY 497	BM 35-32A	TS	TINT	Water	3H, 36Cl, Cl ⁻	0.5	This well makes very little water, ≈ 300 mL was collected.

TINT: treatment system internal location

mL: milliliter

3H: tritium

36Cl: chlorine 36

Cl⁻: chloride

The water sample was submitted to GEL Laboratories, Charleston, South Carolina, for analyses of chloride, chlorine 36, and tritium. The results are listed in Table 3.

Table 3. Produced Water Sample HCY-497 Results, GEL Laboratories

RESULTS REPORT

RIN: 09012065

Site: Rulison Site

Location: BM 35-32A

Ticket Number: HCV 497

Report Date: 3/11/2009

Parameter	Units	Sample		Result	Qualifiers			Standard ¹
		Date	ID		Lab	Data	QA	
H-3	pCi/L	01/22/2009	N001	12.3	U			20,000
Chloride-36	pCi/L	01/22/2009	N001	12.1	U	J		
CHLORIDE	mg/L	01/22/2009	N001	10600		J		

¹ USEPA Primary Radionuclide Drinking Water Standard.